

Docket No. J11L07
Application No. 10/783,527

IN THE DRAWINGS

Please amend Fig. 3 as shown in the attached sheet. A marked copy of the amended Fig. 3 is also enclosed to show the changes made.

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REMARKS

Status of the Application

Claims 1-10 were previously pending. Claim 5 was objected to for informalities. Claim 1 was rejected under 35 USC 103 as being obvious over Appeldorn et al. (US 5,432,876) in view of Presby (4,676,594). Claim 2 was rejected under 35 USC 103 as being obvious over Appeldorn in view of Presby as applied to claim 1, and further in review of Hulse et al. (6,550,950). Claims 3-10 were rejected under 35 USC 103 as being obvious over Appeldorn in view of Presby as applied to claim 1, and further in review of Keplinger (US 5,345,531). In addition, Fig. 3 was objected to for informalities.

Applicant has amended claim 5 to correct the clerical error. Otherwise, the claims remain unchanged. Applicant has amended Fig. 3 to more clearly show the invention. No new matter adds through the amendments.

Drawing Objection

Fig. 3 was objected to for informalities.

Applicant has amended Fig. 3 to correct the minor informality.

Claim Objection

Claim 5 was objected to for informalities.

Applicant has amended claim 5 to correct the clerical error. Withdrawal of the objection is requested.

Claim Rejections

Claim 1 was rejected under 35 USC 103 as being obvious over Appeldorn et al. (US 5,432,876) in view of Presby (4,676,594).

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The present invention is directed to a plastic optical fiber bundle. As recited in claim 1, the plastic optical fiber bundle comprises a plurality of plastic optical fibers, each having an inner core layer and an outer layer, wherein the outer layer of said plastic optical fiber is formed with a plurality of depressions for producing a light leak effect, the depressions do not extend into the inner core layer of said plastic optical fiber.

Appeldorn clearly fails to teach or suggest such a plastic optical fiber bundle. As admitted in the Office Action, Appeldorn does not teach that "the outer layer of said plastic optical fiber is formed with a plurality of depressions for producing a light leak effect, the depressions do not extend into the inner core layer of said plastic optical fiber".

Presby was cited to teach these missing elements. The Office Action alleged that Presby teaches a plastic optical fiber having an inner core 10 and an outer layer 11, wherein depressions are formed on the outer layer, and the depressions do not extend into the inner core.

Applicant respectfully disagrees with the interpretation of Presby provided in the Office Action.

Presby teaches an optical fiber mode scrambler achieved by forming a deformation as a groove or notch on one side of the optical fiber orthogonal to the longitudinal axis thereof. Abstract. However, throughout his patent, Presby repeatedly requires that the notch or groove **at least slightly penetrate the outer surface of core 10**. Abstract, Col. 2, lines 10-12, 60-61, Col. 3, lines 1-4, 13-15, and claim 1.

Presby not only requires that the notch or groove at least slightly penetrate the outer surface of core, but also explains why. On Col. 2, line 66 to Col. 3, line 4, Presby teaches that "[I]t is to be understood that the further the groove or notch 13 enters core 10, the more mode scrambling will be achieved but at the expense of increased loss due to the increased leakage of light from core 10. Therefore, it is preferred that the groove or notch 13 only slightly mar or enter the outer surface of core 10 sufficient to provide a desired mode scrambling with a minimal loss." From Presby's teaching, it is clear that, without marring or entering the core, the notch will not be able to perform the mode scrambling which is the very purpose of Presby's invention.

The Examiner noticed that "*in column 3, lines 1-4, Presby teaches the notch does slightly mar the outer surface of the core*" (first paragraph of page 4), however, argued that "*the slight marring does not extend into the inner core layer as seen in Fig. 5*". Applicant respectfully disagrees with the Examiner's argument.

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From the above teaching of Presby, in order for Presby's invention to work, the groove/notch must mar or enter the outer surface of the core, however slightly. Presby further requires that the slight marring/entering of the core must be **sufficient** to provide a desired mode scrambling. While in the present invention, the depressions are formed on the outer layer and do not extend into the inner core layer in any way.

Referring to Fig. 1, on Col. 2, lines 45-65, Presby teaches that "FIG. 1 is a view in cross-section of a multiple optical fiber To form the mode scrambler in accordance with the present invention, a portion of protective jacket 12 is removed or peeled back without marring the fiber, and a groove or notch 13 is formed on one side of the fiber orthogonal to the longitudinal axis 14 of the fiber and through cladding layer 11 and at least slightly penetrating the outer surface of core 10". Clearly, Fig. 1 is not intended to show the groove/notch does not enter the core. Instead, Fig. 1 is to show the groove/notch slightly penetrating the outer surface of core 10 as described in the patent.

For reasons discussed above, Presby teaches against the present invention as defined in claim 1 because he requires that the groove/notch at least slightly mar or enter the outer surface of the core.

Therefore, Presby cannot cure the deficiencies of Appeldorn, and claim 1 is patentable over Appeldorn and Presby.

Claim 2 was rejected under 35 USC 103 as being obvious over Appeldorn in view of Presby as applied to claim 1, and further in review of Hulse et al. (6,550,950).

Hulse was cited to teach a connector in an illumination device. However, Hulse cannot cure the above discussed deficiencies of Appeldorn and Presby. Therefore, claim 1 as well as its dependent claim 2 are patentable over Appeldorn, Presby and Hulse.

Claims 3-10 were rejected under 35 USC 103 as being obvious over Appeldorn in view of Presby as applied to claim 1, and further in review of Keplinger (US 5,345,531).

Keplinger was cited to supply various elements missing from Appeldorn and Presby. However, Keplinger cannot cure the above discussed deficiencies of Appeldorn and Presby. Therefore, claim 1 as well as its dependent claims 3-10 are patentable over Appeldorn, Presby and Keplinger.

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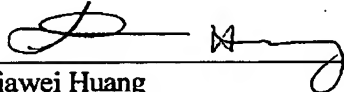
Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that the remaining claims 1-10 are now in condition for allowance. Allowance of this application is earnestly solicited.

Respectfully submitted
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